

CLAIMS

1. Watch intended for defining a location longitude, including a wheel (16) completing one revolution in 12 hours and carrying an hour hand (24), a wheel completing one revolution in one hour and carrying a minute hand (28), and a dial (32), characterised in that it further includes a rotating ring (44) for reading longitude, bearing an index mark (47) and, therefrom, a scale (45) in degrees covering an angle of 180° over the whole of its periphery, in that the dial (32) is equipped with a circular scale (33) for selecting a time zone, with a median point (35) corresponding to the top point of the dial and a graduation covering 12 hours over the whole of its periphery, the value of the graduation of the scale in degrees being equal to 15 times the value of the graduation of the hour scale for the values located opposite each other, when said index mark (47) coincides with said median point (35).
2. Watch according to claim 1, characterised in that the scale (45) in degrees, extends from 0° to 90° on either side of said index mark and in that the circular scale (33) for selecting a time zone bears a graduation going from 0 to +6 hours or -6 hours from the median point (35), depending on the direction of rotation.
3. Watch according to claim 1 or 2, characterised in that said ring (44) encircles the dial (32) and in that the hour hand (24) is extended by an arrow (26) up to the vicinity of the ring (44), which is of greater length than the minute hand.
4. Watch according to any of claims 1 to 3, characterised in that it further includes a display surface (54) in polar co-ordinates, with an angular indication of the months and days of the year and a radial indication in the shape of a curve (50) relative to the equation of time, and an index (48) mounted to move in rotation opposite the display surface and bearing a reading scale (52) for determining the equation of time.
5. Watch according to claim 4, characterised in that said index (48) includes two diametrically opposite arms, bearing a scale relative to the equation of time, on one in degrees of angle and on the other in minutes of time.

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6. Watch according to claim 4 or 5, of the type including a case (10) with a back cover (40), characterised in that said index (48) is mounted so as to move on the back cover of said case.

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7. Watch according to any of claims 4 to 6, characterised in that the scale (45) borne by the ring (44) includes indices defining fractions of a degree for values comprised between $+5^{\circ}$ on either side of said index mark, to facilitate adjustment of the equation of time.

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8. Watch according to any of claims 1 to 7, characterised in that the dial (32) and the ring (44) each bear a scale defining a vernier, to improve the equation of time adjustment precision.

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9. Watch according to claim 8, characterised in that the hour hand (24) and said ring (34) each bear a scale defining a vernier to improve longitude reading precision.

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10. Watch according to any of claims 1 to 9, characterised in that it further includes a disc (22) completing one revolution in 24 hours, in synchronism with the hour hand (24) and bearing data relative to the cardinal points.

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11. Watch according to any of claims 1 to 10, characterised in that it further includes a device for determining the sun's altitude above the horizon including a diaphragm (70) for defining a light ray of small section, a frosted surface (78) onto which said ray is projected.

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12. Watch according to claim 11, characterised in that said device includes a body (60) made of transparent material, of substantially prismatic shape, with two opposite substantially parallel faces (62, 64) and an oblique face (66) connecting the two opposite faces and which includes a transparent substantially central opening (70), intended to let a sun ray penetrate said body and surrounded by an opaque layer (68), wherein said opposite faces (62, 64) have surfaces arranged so as to reflect said ray (74, 76), and wherein one of said faces (74) includes a frosted surface (78) on which an

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image (79) of the opening (70) appears, which moves as a function of the sun's altitude.

13. Watch according to claim 12, characterised in that said device further
5 includes a scale (80) opposite said surface (78), for facilitating the evaluation
of the sun's altitude.

14. Watch according to claim 12 or 13, characterised in that said device is made of tempered plate glass or sapphire.

15. Watch according to any of the claims 11 to 14, characterised in that it further includes a case and a wristband and in that said device is associated with said wristband.

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